



PS-2
Digital
Pitch Shifter
/Delay

INSTRUCTIONS

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

BOSS DIGITAL PITCH SHIFTER/DELAY PS-2

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der

Amtsbl. Vfg 1046 / 1984

(Amtsblattverfügung)

funk-entstört ist.

Der Deutschen Bundespost wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf Einhaltung der Bestimmungen eingeräumt.

Roland Corporation Osaka/Japan

Name des Herstellers/Importeurs

BOSS

PS-2
Digital
Pitch Shifter
/Delay

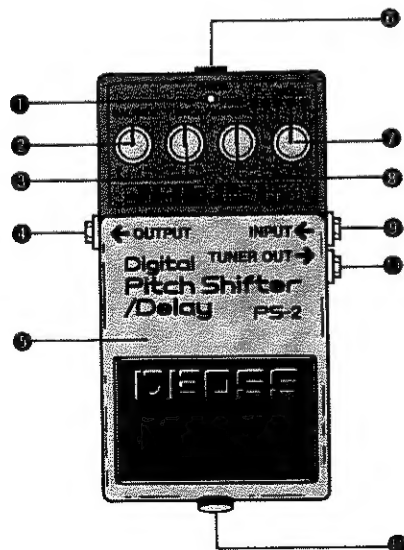
INSTRUCTIONS

Please read the instructions carefully.

- The BOSS PS-2 contains two effects; a digital pitch shifter and delay.
- When used as a pitch shifter, the PS-2 allows the amount of pitch shift within \pm one octave. It also works like an octaver by setting the Mode Selector Switch to 5 or 6 position.
- The Tuner Output Jack is provided to make the Tuner's display show the amount of pitch shift.
- LSI is adopted to reduce the possible time lag between the direct and the effect sounds.
- When used as a delay machine, the PS-2 allows the delay time from 30ms to 2s.



PANEL DESCRIPTION



1 CHECK INDICATOR

This lights up when the effect is turned on, and therefore can be used as an effect on/off indicator.

- The Check Indicator also serves as battery check. When it becomes dimmer or does not light at all, battery replacement is required.

2 BALANCE KNOB

This knob adjusts the volume balance of the direct and effect sounds. At the center-click position, the direct and the effect sounds are equal. At the fully clockwise position, only the effect sound is heard, and at the fully counterclockwise position, only the direct sound is heard.

3 FEEDBACK KNOB

In the Delay mode, this knob can change repeats of delay. Rotating it clockwise will increase the number of repeats. At the fully counterclockwise position, a single delay is obtained. If this knob is rotated clockwise in the Pitch Shift mode, the pitch shifted sound is even more shifted, creating unusual effect.

- As you rotate the Feedback Knob clockwise, the PS-2 may oscillate.

4 OUTPUT JACK

Connect an amplifier to this jack.

5 PEDAL SWITCH

Pressing the pedal turns on or off the effect.

6 AC Adaptor Jack

Connect an AC adaptor (BOSS PSA-120, 220 or 240) to this jack for long and secure operation.

7 MODE SWITCH

The following 6 positions are optional.

Delay Mode (1 to 3)

- 1.....Delay time from 30 to 125ms can be obtained by using the Fine/Manual Knob.
- 2.....Delay time from 125 to 500ms can be obtained by using the Fine/Manual Knob.
- 3.....Delay time from 500ms to 2s can be obtained by using the Fine/Manual Knob.

Pitch Shift Mode (4 to 6)

- 4.....The amount of pitch shift can be set within range of -1 to $+1$ octave continuously.
- 5.....Pitch is shifted one octave up.
- 6.....Pitch is shifted one octave down.

8 FINE/MANUAL KNOB

When the PS-2 is in the Delay mode (Mode Switch set to 1, 2 or 3 position), this knob sets the delay time. Rotating it clockwise increases the delay time, and counterclockwise decreases it.

When in the Manual Pitch Shift mode (Mode Switch set to the 4 position), this adjusts the amount of pitch shift. Rotating it clockwise raises the pitch, and counterclockwise lowers it.

- When the 5 or 6 position is selected with the Mode Switch, the Fine/Manual Knob does not function.

9 INPUT JACK

Connect an electric/electronic musical instrument such as a guitar to this jack.

- Plugging in this jack will automatically switch the unit on. Be sure to disconnect the cord from this jack when the unit is not to be used.

10 TUNER OUTPUT JACK

Connect a tuner to this jack in the Pitch Shift mode (4 to 6 positions). When the effect is on, the amount of the pitch shift (from C) is shown in the tuner's display. (For example, to pitch-shift a semi-tone, make the tuner's display show C#.) When the effect is off, the input signal is sent out intact, allowing you to tune a musical instrument such as a guitar.

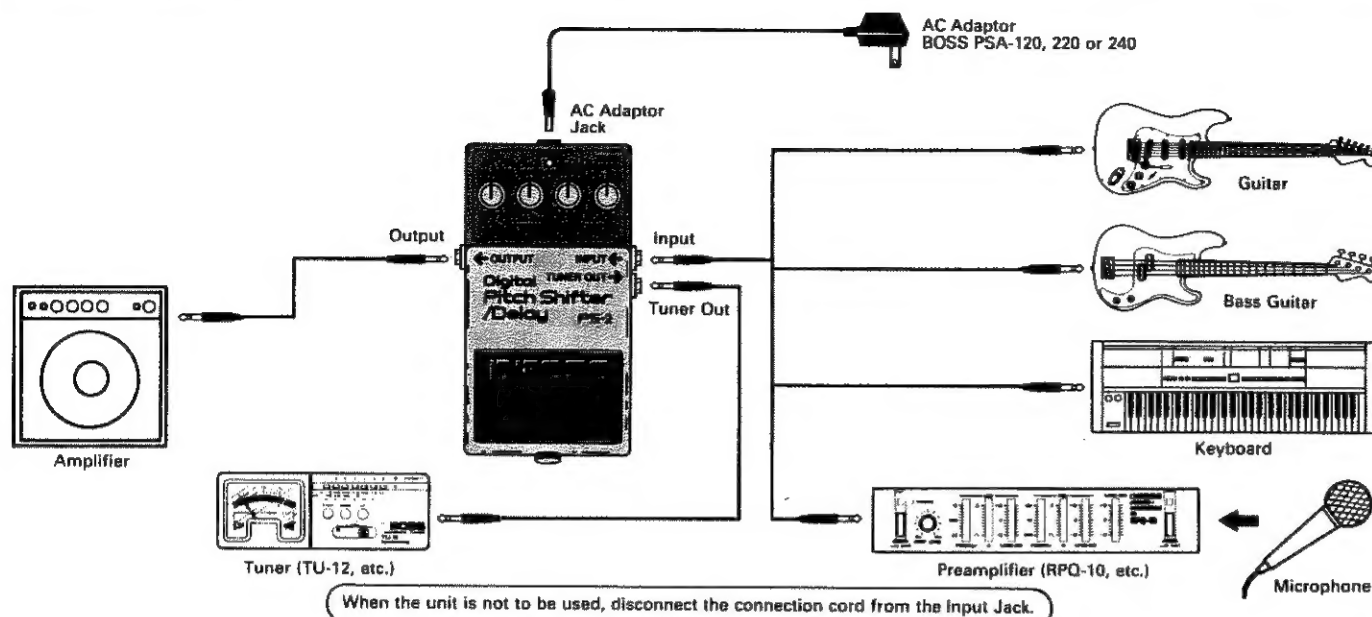
- When in the Delay mode (1 to 3 positions), no signal is sent through the Tuner Out even if the effect is on.

11 Thumb Screw

Loosen the screw to open the cover for battery replacement.

- Do not remove the screw from the cover, or you may lose it.

CONNECTIONS



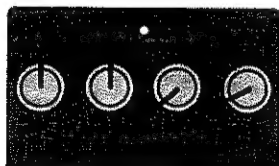
CAUTIONS

- The BOSS alkaline battery will last for 5 to 10 hours depending on how you use the unit.
- If the battery voltage drops (the Check indicator lights dimmer), various symptoms are shown, such as the effect becomes weak, no sound is produced, etc. To prevent that, replace the battery immediately.
- When the unit is not to be used for a long period of time, remove the battery to prevent problems caused by battery leakage.
- Plugging in the Input Jack automatically turns the unit on, so disconnect the cord from the Input Jack when the unit is not in use.
- Avoid using this unit in extreme heat or humidity, or where it may be affected by dust.

OPERATION

[Delay Mode]

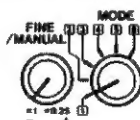
- ① Make all the necessary connections, then set the controls on the panel as shown below.



- ② Press the Pedal Switch and make sure the Check Indicator lights up.

CHECK
O

- ③ Set a desired delay time using the Mode Switch and the Fine/Manual Knob.



- ④ Set a desired number of delay repeats with the Feedback Knob.

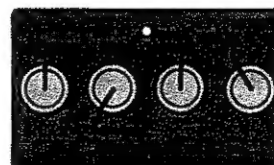


- ⑤ Adjust the volume balance of the direct and the delay sounds with the Balance Knob.



[Pitch Shift Mode]

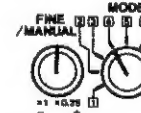
- ① Make all the necessary connections, then set the controls on the panel as shown below.



- ② Press the Pedal Switch and make sure the Check Indicator lights up.

CHECK
O

- ③ Set the amount of pitch shift using the Mode Switch and the Fine/Manual Knob.



- ④ Set the amount of feedback with the Feedback Knob.



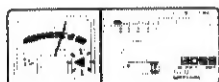
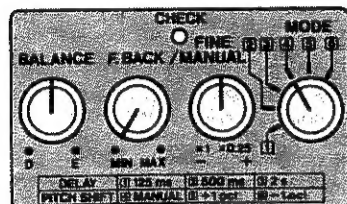
- ⑤ Adjust the volume balance of the direct and the pitch-shifted sounds with the Balance Knob.



SETTING EXAMPLES

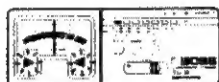
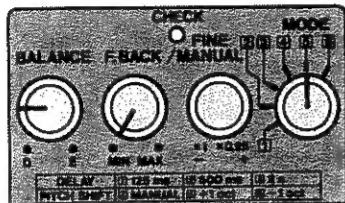
1) Pitch Shift Chorus

This is the chorus sound with little tremolo. If used for guitar's arpeggio, it will sound like 12 string guitar.



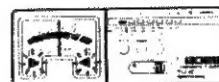
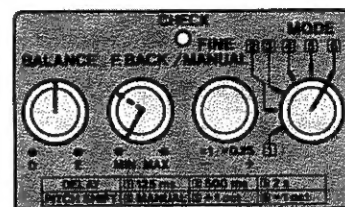
2) Up Octaver

By mixing direct sound with this octave upper sound, a metallic sound can be obtained. It can be effectively used for guitar's cutting.



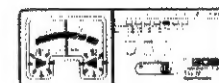
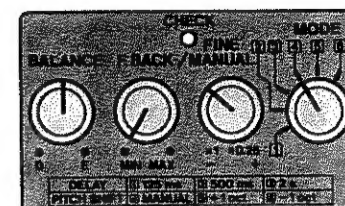
3) Down Octaver

By mixing strings sound with this octave lower sound, a rich sound can be obtained. It can be effectively used for distortion guitar. (By raising the feedback slightly, even richer sound is produced.)

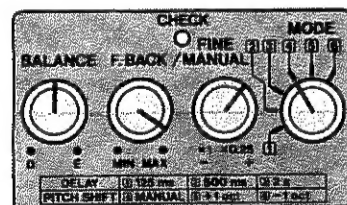


4) Perfect 4th Harmonization

If used for guitar solo, it will sound like twin lead guitars.

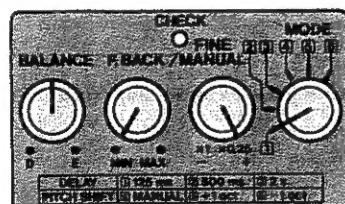


5) Mysterious Sound



6) Short Delay

This adds depth and thickness, and can therefore be effectively used for Heavy Metal sound.



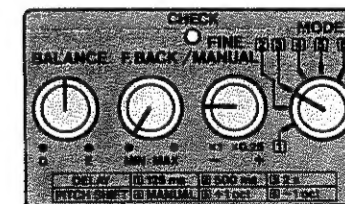
7) Long Echo

Spacious echo sound can be created.

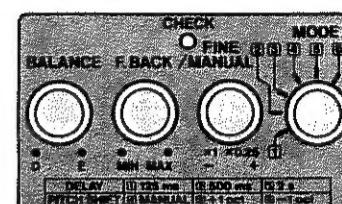
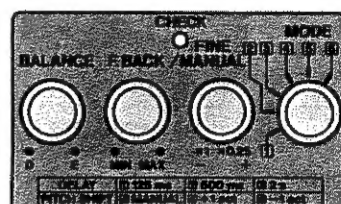
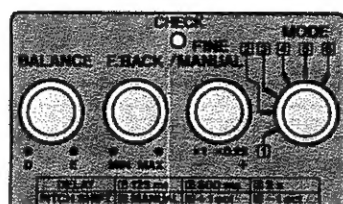
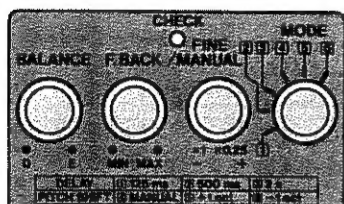
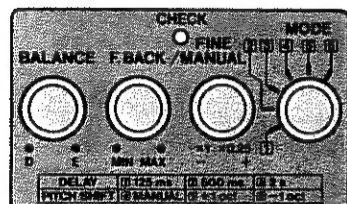


8) Sound on Sound

Duet like effect can be obtained by playing a phrase of direct and delay layer with the delay time set fairly long



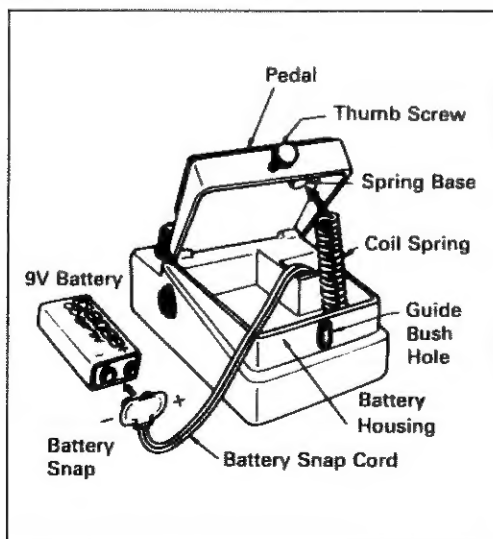
■ SETTING MEMO



■ BATTERY REPLACEMENT

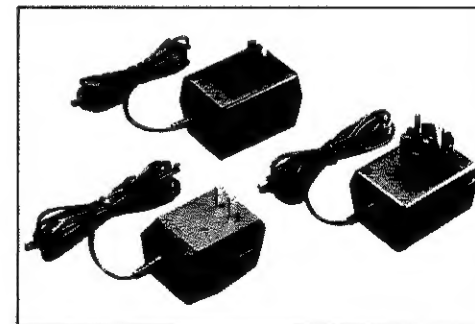
- ① Loosen the Screw of Pedal to open it.
- ② Take out the battery from the Battery Housing and disconnect the Battery Strap.
- ③ Replace with a new battery and connect the Battery Strap.
- ④ Put the Coil Spring to the Spring Base and close the Pedal.
 - Make sure that the Battery Strap is not caught in the Pedal or Coil Spring.
- ⑤ Insert the screw into the Pedal Guide and firmly tighten the screw.

▷ USE ONE 9-VOLT BATTERY



■ AC ADAPTOR

- Be sure to use the AC Adaptor BOSS PAS-120, 220 or 240 depending on the line voltage system in your country.
- Do not use the same socket used for any noise generating or large power consuming device such as a motor, variable lighting system, etc.
- Connect the AC adaptor to the AC Adaptor Jack on the unit first, then to the socket.
- Be sure to keep the battery securely connected even while using the AC adaptor, then the unit will continue to operate even if the AC adaptor cord comes out during performance.
- When the unit is not in use, disconnect the AC adaptor from the socket.



Roland®
2603083200

UPC 2603083200



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■ SPECIFICATIONS

Power	9V DC 6F22 × 1, AC Adaptor (PSA Series)
Current Draw	60mA
Controls	Mode, Fine/Manual, Feedback, Balance
Switches	Mode, Effect ON/OFF
Indicators	Effect On/Off (and Battery Check)
Jacks	Input, Output, Tuner Output, AC Adaptor
Pitch Shift	-1 to +1 octave
Delay Time	30ms to 2s
Frequency Response	[Direct] 10Hz to 100kHz (±3dB) [Effect] 80Hz to 6kHz (±3dB)
Residual Noise	Less than -90dBm (IHF-A)
Input Impedance	1MΩ
Output Load Impedance	More than 10kΩ
Dimensions	70 (W) × 55 (H) × 125 (D) mm / 2-3/4" × 2-3/16" × 4-15/16"
Weight	450g / 1 lb

*Specifications are subject to change without notice.

BOSS
Products of Roland

RADIO AND TELEVISION INTERFERENCE

Warning – This equipment has been verified to comply with the limits for a Class B computing device, pursuant to Subpart J, of Part 15, of FCC rules. Operation with non-certified or non-verified equipment is likely to result in interference to radio and TV reception.

The equipment described in this manual generates and uses radio-frequency energy. If it is not installed and used properly, that is, in strict accordance with our instructions, it may cause interference with radio and television reception.

This equipment has been tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J, of Part 15, of FCC Rules. These rules are designed to provide reasonable protection against such a interference in a residential installation. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment on and off, the user is encouraged to try to correct the interference by the following measure:

- Disconnect other devices and their input/output cables one at a time. If the interference stops, it is caused by either the other device or its I/O cable.

These devices usually require Roland designated shielded I/O cables. For Roland devices, you can obtain the proper shielded cable from your dealer. For non Roland devices, contact the manufacturer or dealer for assistance.

If your equipment does cause interference to radio or television reception, you can try to correct the interference by using one or more of the following measures:

- Turn the TV or radio antenna until the interferences stops.
- Move the equipment to one side or the other of the TV or radio.
- Move the equipment farther away from the TV or radio.
- Plug the equipment into an outlet that is on a different circuit than the TV or radio. (That is, make certain the equipment and the radio or television set are on circuits controlled by different circuit breakers or fuses.)
- Consider installing a rooftop television antenna with coaxial cable lead-in between the antenna and TV.

If necessary, you should consult your dealer or an experienced radio/television technician for additional suggestions. You may find helpful the following booklet prepared by the Federal Communications Commission:

"How to Identify and Resolve Radio-TV Interference Problems"

This booklet is available from the U.S. Government Printing Office, Washington, D.C., 20402, Stock No. 004-000-00345-4.